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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,501	12/12/2003	Sudarshan Palliyil	JP920030154US1	1612
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ANTHONY ENGLAND PO Box 5307 AUSTIN, TX 78763-5307			EXAMINER TURCHEN, JAMES R	
			ART UNIT 2139	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/734,501	Applicant(s) PALLIYIL ET AL.	
	Examiner James Turchen	Art Unit 2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2007.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14 and 39-63 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-4, 6-14 and 39-63 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-4, 6-15 and 39-63 are pending. Claims 1-3, 6 and 12 are amended.

Claims 15-38 are cancelled. Claims 39-63 are new.

Response to Arguments

Applicant's arguments with respect to claims 1-4, 6-12 and 39-49 and 51-62 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 6/18/2007 have been fully considered but they are not persuasive in regards to claims 13, 50 and 63. Nachenberg's method of scanning comprises computing a hash value for a file. Norton AntiVirus was incorporated by reference that computing a hash value and comparing (scanning) could be done on a zip or archive file. The act of scanning a zip or archive file would result in a single hash for a group of files contained in the zip or archive file.

Claim Objections

Claims 40-51 are objected to because of the following informalities: Claims 40-51 are dependent upon claim 1 and are duplicates of claims 2-14 which also depend on claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nachenberg.

Regarding claims 1, 39, and 52:

Nachenberg discloses a method, system and computer program product for identifying data processing systems within a network having a vulnerability comprising: computing a set of hash values representing a set of resources for which an operation has been performed (column 4 lines 5-8); storing the set of hash values (column 4 lines 5-8); in response to a requirement for performance of the operation, computing a new set of hash values representing the set of resources (column 4 lines 40-47); comparing the new hash values with the stored hash values for the set of resources to identify matches between new hash values and stored hash values (column 4 lines 48-63); determining that performance of the operation is not currently required for resources for which a match is identified between the respective new hash value and a stored hash value (column 4 lines 48-53); and performing the operation for resources for which no match is identified between the new hash value and any stored hash value (column 4 lines 54-63). Nachenberg also discloses wherein the step of computing a new set of hash values comprises reading the set of resources from a first storage medium of a system in the data processing network into a second storage medium, the second storage medium providing faster access than the first storage medium, wherein the computing of the new set of hash values accesses the set of resources read to the second storage medium (column 4 lines 29-31), and the method further comprises: comparing each resource of the set of resources with a maximum size limit to identify a

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subset of the resources, wherein each resource of the subset is smaller than said size limit (it is obvious that the data does not exceed the storage threshold (maximum size of the memory) of said second storage, this is a common feature of memory management), and retaining said subset of resources within said second storage medium (it is obvious to hold only the amount that is available in said second storage, Nachenberg teaches the use of sectors (column 3 line 66 to column 4 line 10), which are fractions of the original file). Nachenberg, however, does not disclose performing, for the subset of resources retained within said second storage medium, further operations on ones of the subset of resources, the further operations being selected from operations including making backup copies and transferring copies of the resources of the subset of resources to other systems. Making backup copies is well known in the art and it would have been obvious to one of ordinary skill in the art at the time of invention to make backup copies for system restoration in the event of a disaster such as hardware failure, system intrusion, etc. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to backup the files after the virus scan deemed the files virus-free.

Regarding claims 2, 40 and 53:

Nachenberg discloses the method of claim 1, wherein the operation comprises scanning the resources to identify computer viruses (column 4 lines 54-63).

Regarding claims 3, 41 and 54:

Nachenberg discloses the method of claim 1, wherein the operation comprises making a backup copy of the resources (column 4 lines 58-63, the file is moved to disk,

creating an effective backup; additionally, Norton AntiVirus (column 3 lines 14-15, its features are incorporated by reference) has the ability to create a backup on the quarantine server, see *Norton AntiVirus Enterprise Solution 4.0*).

Regarding claims 4, 42 and 55:

Nachenberg discloses the method of claim 1, for controlling performance of virus scanning and backup copy operations in relation to a set of resources within a data processing network, the method comprising: using said identification of a match between a respective new hash value and a stored hash value for a resource, resulting from a single comparison of new and stored hash values, to determine that neither virus scanning nor backup copy operations are currently required for the resource (column 4 lines 48-53).

Regarding claims 6, 43 and 56:

Nachenberg discloses the method of claim 1, wherein the operation comprises transferring a resource across a low bandwidth communication channel (Norton AntiVirus (column 3 lines 14-15) has the ability to create a backup on the centralized, quarantine server (inherently requires a low-bandwidth communication channel to send the information from host/server to server), see *Norton AntiVirus Enterprise Solution 4.0*).

Regarding claims 7, 44 and 57:

Nachenberg discloses the method of claim 1, wherein the steps of computing hash values comprise: applying a secure hash function to a bit pattern representing a resource, for each of a set of resources (column 1 line 60 to column 2 line 9). It is

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inherent that the hash would have been a secure hash as secure hashes were common at the time of invention as is shown in Bruce Schneier's *Applied Cryptography, 2d ed.* (Chapter 18 - *One-Way Hash Functions*).

Regarding claims 8, 45 and 58:

Nachenberg discloses the method of claim 7, wherein the set of resources for which hash values are computed for a data processing system comprises the set of all files of executable file types on the system. Nachenberg discloses a method for examining files associated with a digital computer (column 1 lines 60-63). It is an inherent trait of anti-virus software to scan all executable file types on the system.

Regarding claims 13, 14, 50, 51, 62 and 63:

Nachenberg discloses the method of claim 1, wherein at least one resource of the set of resources comprises a group of files (column 3 lines 14-15 discloses the use of Norton AntiVirus (NAV) which contains the capability of scanning compressed files (see *Norton AntiVirus Enterprise Solution 4.0*)) and the step of computing a set of hash values comprises computing a single hash value for the group of files (it is inherent that the invention disclosed by Nachenberg would use the method for scanning a file applied to scan the compressed file).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 46-49 and 58-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nachenberg as applied to claims 1, 39, and 52 above, and further in view of Feigen et al. (US 2002/0138554).

Nachenberg discloses the method, system and computer program product of claim 1, but it does not disclose storing hash values and comparing the hash values at a first data processing system. Feigen et al. discloses the method wherein the host hashes a block of code (figure 2, 202), transmits parameters to client (204), the remote device hashes and determines hash value (206 and 208), and sends the hash to host for comparison by host (210 and 212). In paragraph 0016, Feigen et al. discloses that if the two hash values are identical, the host confirms that the code at the resident has not been tampered with. Additionally, Feigen et al. discloses that if the two hashes are not identical, then the host may take additional action. It would have been obvious to incorporate a virus scan or backup into the additional action as disclosed by Nachenberg in order to check if a virus is present.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Turchen whose telephone number is 571-270-1378. The examiner can normally be reached on MTWRF 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRT

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A handwritten signature in black ink, appearing to read 'Ayaz Sheikh', with a long, sweeping horizontal stroke extending to the right.

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100